## 1. Comparison of participants in Ontario Modified STRATIFY and Predict_FIRST development studies

The development of the Ontario Modified STRATIFY was based on data obtained from patients over 65 years of age admitted consecutively to 4 general medical units in 2 Canadian acute care hospitals (6). Patients were excluded if they were receiving palliative or critical care (6). The development of the Predict_FIRST was based on data obtained from patients over 50 years of age admitted consecutively to 3 rehabilitation wards in 2 Australian public hospitals (2). Patients were excluded if they did not speak conversational English and an interpreter was not available; were deemed medically unable to safely complete the assessments or had a cognitive impairment with no person responsible available to give consent (2).

## 2. Comparison of fall definitions used in Predict_FIRST and Ontario Modified STRATIFY studies

The fall definition used in the development of the Predict_FIRST was the same as the current study (2). In the development of the Ontario Modified STRATIFY a fall was defined as an individual involuntarily coming to rest on the ground or surface lower than their original station (6).

## 3. Comparison of demographics of development and validation samples

The mean age of participants 80 years (standard deviation (SD) = 11, range = 27– 99 years) similar to the development samples for the Predict_FIRST (82, SD = 8 years) (2) and Ontario Modified STRATIFY (78, SD = 8 years) (6). A total of 173 participants (58%) were women. The proportion was similar to the Ontario Modified STRATIFY sample (55%) (6) and lower than the development sample for the Predict_FIRST (71%) (2). The mean length of stay on the rehabilitation ward was 22 days (SD = 13), which was similar to the development sample for the Predict_FIRST (25 days, SD = 15) (2) and the mean hospital length of stay was 47 days (SD = 44) (length of stay was not provided for the development sample of the Ontario Modified STRATIFY). On admission to the ward, 140 participants (47%) had a primary diagnosis of a fracture post-fall, 44 (15%) had a primary diagnosis of a medical condition and 37 (12%) had a primary diagnosis syncope or fall without fracture. The most common primary diagnoses in the Predict_FIRST development sample were also fracture (23%), and fall or syncope (11%), but also neurological conditions (7%). The primary diagnoses in Ontario Modified STRATIFY development sample were circulatory disorders (45%), respiratory disorders (21%), and digestive disorders (4%), which reflect the medical wards from which they were recruited. Table I gives more details on the demographics and diagnoses of the present sample.

The distribution of predictor variables in the Predict_FIRST development sample and this validation sample are shown in STable I. There was a higher proportion of participants with impaired cognition, requiring frequent toileting, taking CNS medication and unable to perform tandem stance in the validation sample compared with the development sample. No data on distribution of predictor variables for the Ontario Modified STRATIFY development sample were available for comparison.

## 4. Comparison of outcome in development and validation samples

In the current study 14% of participants fell. This result is consistent with the Predict_FIRST development sample (14%) (2) and higher than the development sample of the Ontario Modified STRATIFY (5.5%) (6).

**STable I.** Comparison of participant characteristics in development and validation samples

| | Predict_FIRST development sample (n = 533) | Ontario Modified STRATIFY development sample (n = 620) | Present study (n = 300) |
|---|---|---|---|
| Demographics | | | |
| Age, years, mean (SD) | 82 (8.3) | 78 (7.7) | 80 (11) |
| Female, n (%) | 377 (71) | 338 (54.5) | 173 (58) |
| Rehabilitation ward length of stay, days, mean (SD) | 25 (15) | NA | 22 (13) |
| Predictors | | | |
| History of falls | NA | NA | 200 (66) |
| Impaired cognition | 76 (14) | NA | 79 (26) |
| Impaired vision[a] | NA | NA | 137 (46) |
| Frequent toileting | 159 (30) | NA | 128 (43) |
| Impaired mobility[a] | NA | NA | 118 (39) |
| CNS medication*[b] | 219 (41) | NA | 191 (64) |
| Unable to do tandem stance[b] | 312 (59) | NA | 250 (83) |
| Male sex[b] | 156 (29) | NA | 127 (32) |
| Outcome | | | |
| Number of falls | 110 | 77 | 53 |
| Number of fallers (%) | 75 (14) | 34 (5.5) | 42 (14) |

[a]Item from Ontario Modified STRATIFY only; [b]Item from Predict_FIRST only.
NA: data not available; CNS: central nervous system.